Site Development Plans

Building No. 1

Baltimore - Washington Commerce Park Howard County, Maryland

S.D.P. 96 - 45



Hill Management Services, Inc.

9640 Deerco Road

Timonium, Maryland 21093 410-666-1000

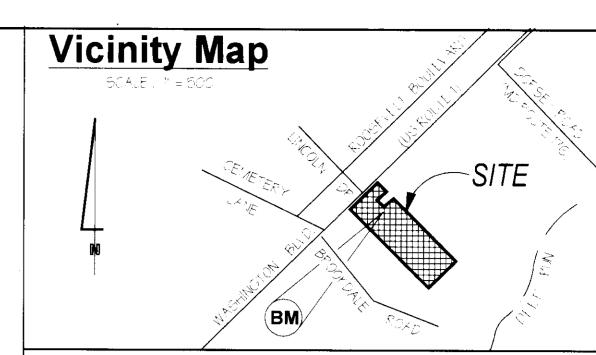


GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

Civil Engineers and Land Surveyors

658 Kenilworth Drive, Suite 100 Towson, Maryland 21204 (410) 825-8120





Benchmark:

Index of Sheets:

Note on S.D.P. Approval:

APPROVED: Howard County Department of Planning and Zoning marche S. Ja augh. 7377 BALTIMORE WASHINGTON BOULEVARD SUBDIVISION NAME PARCEL #

12-22-95 PER. HOW. CO. EMT 01-18-96 | PER. HILL Ø2-14-96 PER HOW. CO. EMT

WATER CODE BOI

BUILDING NO. 1 **BALTIMORE - WASHINGTON COMMERCE PARK**

COVER SHEET

ELECTION DISTRICT: 1 HOWARD COUNTY, MARYLAND

DESIGNED : T.N.W. DRAWN : E.M.T. CHECKED : T.N.W. SHEET 1 OF 8 P/N: 7889 dgn name: coversheet.dgn 01-16-96 E.M.

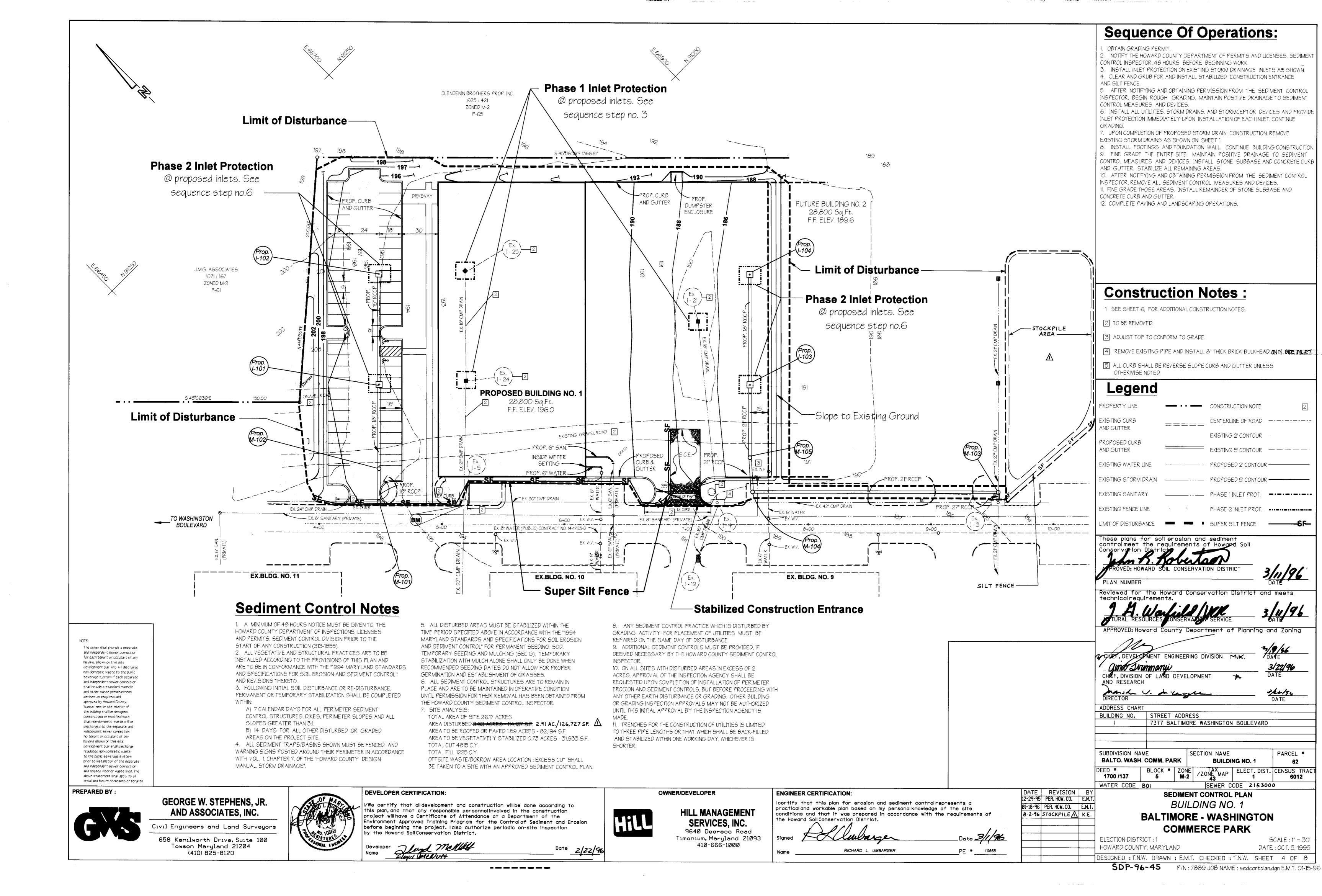
SCALE: 1' = 30'

BUILDING NO. 1

SEWER CODE 2153000

and independent sevier connection and related interior has be nest the above statement shall apply to all initial and future occupants on terants

perecomment plan shall discharge regulated non-domestic viaste to the bubble betweeninge system prior to installation of the separate



Stabilization Specifications

Section I - Vegetative Stabilization Methods and Materials

- A. Site Preparation 1. Install erosion and sediment control structures (either temporary or permanent) such as diversions,
- grade stabilization structures, berms, waterways, or sediment control basins. 11. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- 111. Schedule required soil tests to determine soil amendment composition and application rates for sites

B. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 areas. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples may be taken for engineering purposes may
- 11. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the
- ma Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains
- at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a *100 mesh sieve and 98 100% will pass through a *20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3 - 5 of soil by disking or other suitable means.

- v. Soil Amendments: Use only one of the following schedules
- 1. Preferred Apply 2 tons per acre dolomtic limestone (92 lbs. / 180 s.f.) and 680 lbs. per acre 10-10-10 fertilizer (14 lbs. / 1860 s.f.). Before seeding, harrow or disc into upper three inches of soil. At time of seeding, apply 4860 lbs. per acre 38-8-8 auriform fertilizer (9.1 lbs / 1860 s.f.).
- 11. Acceptable Apply 2 tons per acre dolomtic limestone (92lbs. / 1866 s.f.) and 1886 lbs. per acre 18-18-18 fertilizer (23 lbs. / 1868 s.f.) before seeding, harrow or disc upper three inches of soil.

C. Seedbed Preparation

i. Temporary Seeding

- a Seedbed preparation shall consist of loosening soil to a depth of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should not be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
- b. Apply fertilizer and lime as prescribed on the plans.
- c. Incorporate lime and fertilizer into the top 3 5 of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

- 1. Soil pH shall be between 6.0 and 7.0.
 2. Soluble salts shall be less than 500 parts per million (ppm).
 3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
 4. Soil shall contain 1.5% minimum organic matter by weight.
 5. Soil must contain sufficient pore space to permit adequate root penetration.
 6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
- b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 5 to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope. c. Apply soil amendments as per soil test or as included on the plans.
- d. Mix soil amendments into the top 3 5° of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stopes and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3 of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

- 1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material in this job.
- 11. Inoculant The inoculant for treating legime seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. NOTE: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 80 degrees F. can weaken bacteria and make inoculant less effective.
- NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED. E. Methods of Seeding
- i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or
- a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 180 lbs. per acre total soluble nitrogen; P205 (phosphorus); 200 lbs./ac.; K20 (potassium); 200 lbs./ac.
- b. Lime use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding).
 Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated
- c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without
- 11. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
- a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted
- b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- 111. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
- a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
- b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the

F. Mulch Specifications (In order of preference)

- 1. Straw shall consist of thoroughly threshed wheat, rue or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- 11. Wood Cellulose Fiber Mulch (WCFM) a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state. b. WCFM shall be died green or contain a green die in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
- c. WCFM, including due, shall contain no germination or growth inhibiting factors.
- d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
- e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.5% maximum and water holding

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

1. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance

1. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1 and 2. Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is

- nı. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- I. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods(listed by
- preference), depending upon size of area and erosion hazard: 1. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used
- 11. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. 111. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on the crests of banks. The remainder of area should appear uniform after binder application.
- Sunthetic binders such as Acrulic DLR (Argo-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or ther approved equal may be used at rates recommended by the manufacturer to anchor mulch. 1v. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3000 feet long.
- Section II Temporary Seeding Vegetation - annual grass or grain used to provide cover on disturbed ereas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.
- A. Seed Mixtures Permanent Seeding
- e select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans, Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting For special lawn maintainance areas, see Sections IV Sod
- 11. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.
- $_{
 m III}$. For areas receiving low maintenance, apply wreaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150) lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the

Section III - Permanent Seeding

- Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance. A. Seed Mixtures - Permanent Seeding
- i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans, Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintainance areas, see Sections IV Sod
- 11. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.
- iii. For areas recieving low maintenance, apply ureaform fertilizer (46-8-8) at 3-1/2 lbs/1888 sq. ft. (158 lbs/sc), in addition to the above soil ammendments shown in the table below, to be performed at the

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or flatter). A. General specifications

- 1. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approval. Sod labels shall be made available to the job foreman and inspector.
- 11. Sod shall be machine cut at a uniform soil thickness of 3/4', plus or minus 1/4', at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
- 111. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- 1v. Sod shall not be harvested or transplanted when mousture content (excessively dry or wet) may adversely affect its survival.

6 Sod shall be harvested delivered, and installed within a period of 36 hours. Sod not transplanted

- within this period shall be approved by an agronomist or soil scientist prior to its installation.
- vi. Site Preparation : Fertilizer and Lime application rates will be determined by soil test. Under unusual circumstances where there is insufficent time for a complete soil test, fertilizer and lime may be applied in amounts shown under vi-b, below.
- a. Prior to sodding, the surface will be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing, or maintenance operations.
- b. Where soil is acid or composted of heavy claus, ground limestone will be spread at the rate of 2 tons per acrefill lbs. / 1888 s.f.J. In all soils 1888 lbs. per acre (25 lbs. / 1888 s.f.) of 18-18-18 fertilizer or equivalent will be uniformly applied and mixed into the top thre inches of soil with the required time.
- c. All areas receiving sod will be uniformly fine graded. Hard packed earth will be scarified prior to placement of sod.

B. Sod Installation

- 1. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
- 11. The first row of sod shall be laid in a streight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause druing of the roots.
- 111. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- iv. Sod shall be wetered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

- 1. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.
- 11. After the first week, sod watering is required as necessary to maintain adequate moisture content. 111. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2' and 3' unless otherwise specified.

Section IV - Turfgrass Establishment

- Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 11/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future moving of grasses will pose no difficulty.
- NOTE: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. Turfgrass Mixtures

- 1. Kentucky Bluegrass Fall sun mixture For use in areas that receive intensive management Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- 11. Kentucky Bluegrass/Perennial Rye Full sun mixture For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management Certified Perennial Ryegrass Cultivars/ Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1800 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 18% to 35% of the mixture by weight.

111. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate 5 to 8 lb./1000 square feet. One or more cultivars may be blended.

1v. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass Cultivars 38 - 467, and certified Fine Fescue and 68 - 78%. Seeding rate: 1 1/2 - 3 lbs./1808 square feet. A minimum of 3 Kentucky bluegrass cultivers must be chosen, with each cultiver ranging from a minimum of 18% to a maximum of 35% of the mixture by weight.

NOTE: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo *77, "Turfgrass Cultivar Recommendations for Maryland".

B. Ideal times of seeding

- Western MD: March 15-June 1, August 1-October 1 (Hardiness Zones 5b, 6a)
- Central MO: March 1-May 15, August 15-October 15 (Hardiness Zones 6b)
- Southern MD, Eastern Shore: March 1-May 15, August 15-October 15 (Hardiness Zones 7a, 7b) C. Irrigation
- If soil moisture is deficient, supply new seedings with adequate water for plant growth $(1/2^{\circ}-1^{\circ}\text{ every})$ to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.
- D. Repairs and Maintenance Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the
- Once the vegetation is established, the site shall have 95% groundcover to be considered adequately 11. If the stand provides less than 40% ground coverage, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendation:
- 111. If the stand provides between 48% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary. 1v. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" Bulletin No. 171.

2 Yors/ac (100lb/1000 s.f.

Fertilizer Rates

Temporary Seeding

(15lb/1000 s.f

Permanent Seeding Fertilizer Rate Rate

P205 175 lb/ac 75 lb ac (100 lb. (2.0b) (4.0b) (100 lb. (2.0c) s.f.) (2.0c) s.f. (2.0c) s.

Table 25 - Permanent Seeding for Low Maintenance Areas

V	SEED MIX	PLANTING RATE		STE USDA		RECOMMENDED PLANTING DATES							201
X	(USE CERTIFIED MATERIAL IF A/AILABLE)	LBS./AC.	LBS:/1000 SQ:FT:	CONDITIONS	HARDINESS ZONES	3.1- 5.15	3/5 - 6/1	5/16 - 8:14	6:2 - 7/31	8:1- 10:1	8.15 - 10.15	8:15 - 11:15	E 6
1	TALL FESCLE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150	3.4	MCIST TO DRY	56 66 7 a	X X	X			×	X	, x	A
2	KENTUCKY BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150	3.4	VOIST TO MODERATELY ORY TO DRY	(6p)	i	X			X	×		В
	TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLJEGRASS (5%)	125 15 10	2.9 .34 .23	MOIST TO DRY	58 6A 6B 7.4 78	1 1 1	₹			X		×	C
4	RED FESCUE OR CHEWINGS FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 60 15	.92 .92 .34	MOIST TO DRY	5b 6a (6p)	ζ.	X			y X	Х		D
5)	TALL FESCUE (85%) OR PERENNIAL RYEGRASS (50%) PLUS CROWNVETCH OR FLATPEA	110 20 20 20 20	2.5 .46 .46 .46	MCIST TO DRY	5h 6a 6b) 7a		X			λ X	×	,	E
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (33%)	4 20	.09 .46	DRY TO VERY DRY	7 n 6 a 7 a	X X X		X				<u> </u>	=
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) PLUS SERECIA LESPEDEZA (15%)	110 3 20	2.5 .07 .46	DRY 10 YERY DRY	5 h	f	*	X X	X	X	×	X	G
8	REED CANARYGRASS (75%) REDTOP (6%) PLUS BIRDS=OOT TREEFOIL (*9%;	40 3 10	.92 .07 .23	WET TO MODERATELY DRY	5¢	X X	X			у	i i	X	4
9	TALL FESCUE (86%) POA TRIVIALIS (7%) BIRDSFOOT TREEFOIL (7%)	'25 10 10	2.9 .23 .23	WET TO MCDERATELY DRY	51 ⁵		X			χ	1		1
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3.4 .69	WET TO DRY	(6p) 5b 6a (6p)		×			X	×	X	J
*1	HARD FESCUE (100%)	75	.=	MOIST TO DRY	5 s 6 d 6 r	X X	X			į.	į.	X	Κ

Table 26 - Temporary Seeding Rates, Depths, and Dates

	IVILLA VIOLVI OFFILIAO		DEPT-									
SPECIES	RATES			7a ard °b		6b			6a and 5b			
OF LUIED	PER ACRE	LB5./1000 5Q. FT.	INCHES	2/1 - 4:30	5.1 8.14	8.15 - 11.30	3/1 - 4:30	5.1 - 8/14	8/15 - 11/15	3,15 - 5,31	6/1- 7:31	8,1 - 10,31
CHOOSE ONE: BARLEY OATS RYE	2.5 B.U. (*22 bs.) 3 B.U. (96 bs.) 2.5 B.U. (140 bs.)	2.80 2.21 3.22	1 · 2 1 · 2 1 · 2	X X	-	BY '0.15 '	X X X	- - -	BY 10/15 - X	* * *	- -	5Y 10.11 X
BARLEY OR RYE PLUS FOXTAIL MILLET	*50 lbs.	3.45		X	X	10,15	X X	X	10/15 X	x X	X	10/1 X
WEEPING LOVEGRASS	4 125.	.09	1,4 - 1,2		3	-	-	x	-	-	Х	-
ANNUAL RYEGRASS	50 bs.	1.15	1/4 - 1/2	Χ		11/1	Χ		11,1	X	-	<i>8/</i> 15
MILLET	50 lbs.	1.15	1,2	-	X		-	Χ	-		X	-

OWNER/DEVELOPER

9640 Deereco Road Timonium, Maryland 21093 410-666-1000

HARDINESS ZONES AND SEEDING DATES

ENGINEER CERTIFICATION:

certify that this plan for erosion and sediment controlrepresents a ractical and workable plan based on my personal knowledge of the site anditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

RICHARD L. UMBARGER Name

Construction Specifications 1. Excavate completely around the inlet to a depth of 18" below the

DETAIL 23A - STANDARD INLET PROTECTION

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nall strips between the posts on the ends of the inlet. Assemble the top portion of the $2^{\prime\prime}$ x $4^{\prime\prime}$ frame using the overlap joint shown on Detail 23A. The top of the frame (wair) must be 6" below adjacent roadways where flooding and safety issues may arise.

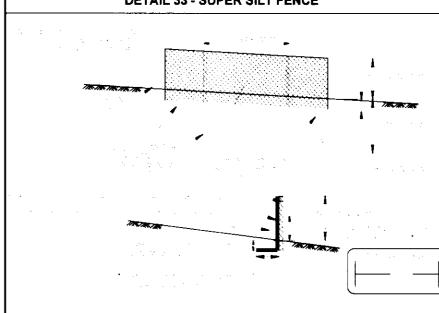
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten secursly. The ends must meet and overlap at a

4. Stretch the Geotextlie Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides 6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE F-17-3 WATER MANAGEMENT ADMINSTRATION MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE PAGE
SOIL CONSERVATION SERVICE E - 16 - 5 MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE

7. The structure must be inspected periodically and after each



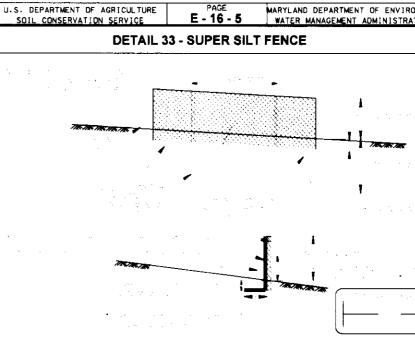
Fencing shall be 42" in height and constructed in accordance with the

2. The posts do not need to be set in concrete.

ILS. DEPARTMENT OF AGRICULTURE

- 3. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six gauge (6) or heavier
- 5. Filter cloth shall be embedded a minimum of $B^{\prime\prime}$ into the ground.

NOTE: PROJECT IS IN USDA HARDINESS ZONE 6b



Construction Specifications

- latest Maryland State Highway Details for Chain Link Fencing. The SHA specification for a 6' fence shall be used, substituting 42" fabric and 6'
- 4. Filter cloth shall be fastened securely to the chain link fence with ties
- overlapped by 6" and folded. 7. Maintenance shall be performed as needed and slit buildups removed when "buiges" develop in the slit fence, or when slit reaches 50% of fence height

5. When two sections of geotextile fabric adjoin each other, they shall be

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

PROFILE

PLAN VIEW

Length - minimum of 50' (#30' for single residence lot).

Construction Specification

2. Width - 10' minimum, should be flared at the existing road to provide a turning

Geotextile fabric (filter cloth) shall be placed over the existing ground prior

to placing stone. **The plan approval authority may not require single family

4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the

. Surface Water – all surface water flowing to or diverted toward construction

entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a

mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe had to be sized according to the drainage. When the SCE is located at a high spot and

has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

5. Location - A stabilized construction entrance shall be located at every point

where construction traffic enters or leaves a construction site. Vehicles leaving

the site must travel over the entire length of the stabilized construction entrance

24.0 MATERIALS SPECIFICATIONS

-Grab tensile strength A5TM D 1682: 4 x 8" specimen, 1x2" ciamps, 12" /min. strain rate in both principal directions of geotextile fabric

The fabric shall be mert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew esistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of

In addition, Classes A through E shall have a 0.01 cm./sec, minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal/ft. /min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322.

September 1 fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure

The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

a minimum of 85% by weight of polyolephins, polyosters, or polymides. The geotextile fabric shall resis

Sit tence
Class Figeotextile fabrics for silt fence have a 50 b //n minimum tensile strength and a 20 b //n.

STRENGTH LB. MIN

BURST STRENGTH

PSI. MIN.

Table 27 Geotextile Fabrice

0.30

0.30

0.40-0.80*

The properties shall be determined in accordance with the following procedure:

- Apparent opening size MSMT 323

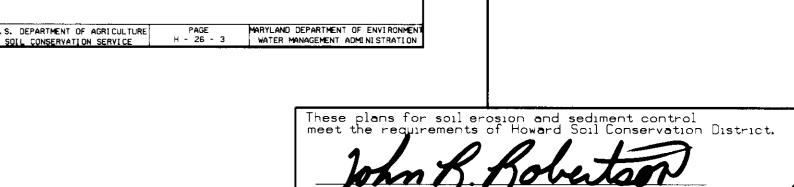
-Burst strength ASTM 0 3786

SCE

CLA55

F (SILT FENCE)

* US Std. Sieve CW-02215



DETAIL 22 - SILT FENCE

hat the test at the test in

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the

standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties

Tensile Strength 50 lbs/in (min.)

Tensile Modulus 20 lbs/ln (min.)

Filtering Efficiency 75% (min.)

or staples at top and mid-section and shall meet the following requirements

3. Where ends of dectextile fabric come together, they shall be overlapped

bulges occur or when sediment accumulation reached 50% of the fabric height.

4. Silt Fence shall be inspected after each rainfall event and maintained when

U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE E-15-3 WATER MANAGEMENT ADMINISTRATION

ground. Wood posts shall be $1^{1}/2^{n} \times 1^{1}/2^{n}$ square (minimum) cut, or $1^{3}/4^{n}$ digmeter minimum) round and shall be of sound quality hardwood. Steel posts will be

CROSS SECTION

Test: MSMT 509

Test: MSMT 509

Test: MSMT 322

0.3 gal ft¹/ minute (max.) Test: MSMT 322

PERSPECTIVE VIEW

TOP VIEW

JOINING TWO ADJACENT SILT

FENCE SECTIONS

Reviewed for the Howard Conservation District and meets technical

VED: Howard County Department of Planning and Zoning

HIEF. DIVISION OF LAND DEVELOPMENT

ADDRESS CHART BUILDING NO. | STREET ADDRESS

7377 BALTIMORE WASHINGTON BOULEVARD SUBDIVISION NAME SECTION NAME

BALTO. WASH. COMM. PARK 1700 / 137 WATER CODE BOI

SEWER CODE 2153000 SEDIMENT CONTROL DETAILS BUILDING NO. 1

ELECTION DISTRICT: 1

SCALE: AS SHOWN DATE: OCT. 5, 1995

BUILDING NO. 1

^MAP

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

Civil Engineers and land Surveyors 658 Kenilworth Drive, Suite 100 Towson, Maryland 21204 (410) 825-8120



DEVELOPER CERTIFICATION:

We certify that alldevelopment and construction will be done according to this pian, and that any responsible personnel involved in the construction roject willhave a Certificate of Attendance at a Department of the Invironment Approved Training Program for the Controlof Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard SoilConservation District.

Sloyd McNUH

_ Date <u>2/22/96</u>



SERVICES, INC.

HILL MANAGEMENT

DATE | REVISION

2-29-95 PER. HO. CO.

BALTIMORE - WASHINGTON COMMERCE PARK

HOWARD COUNTY, MARYLAND DESIGNED : T.N.W. DRAWN : E.M.T. CHECKED : T.N.W. SHEET 5 OF 8

P/N: 7889 NAME: seanotes.dgn E.M.T. 12-29-95

PARCEL #

6012

| ELECT.DIST.|CENSUS TRAC

The owner shall provide a separate

ard independent sewer connect on

for each tenant or occupant of any

non-domestic waste to the public

sewerage system if each separate

ard independent sewer connection

snal: include a standard markole and other waste precreatment devises as required and

approved by Howard Courty

Waste lines on the interior of

the pullaira shall be designed.

constructed or modified such

independent sewer connection.

No tenant or occupant of any

development blan shall alsonarge

requiated non-domestic waste

to the public sewerage system

prior to instakation of the separate and independent sewer connection

and related interior viaste lines, the

above statement shall apply to all Initial and future occupants or tenants

pullaing snowr on this site

that nor-domestic waste will be discharged to the separate and

bullaing, showr on this site development plan who will discharge 2. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.

3. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS
OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT
BUILDING DIMENSIONS.
4. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY

BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.

5. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.

6. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.

7. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.

8. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF

THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.

8. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.

9. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-

BOO-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.

10. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.

11. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY G. W. STEPHENS OF ANY DEVIATION FROM THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM G. W. STEPHENS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

13. CONTRACTOR SHALL CONFORM TO ALL GRADES AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1 FOOT.

14. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL

14. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.

15. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING,

ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.

16. CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN PER FOOT).

17. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.

18. CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS. TOPSOIL SHALL BE APPROVED BY LANDSCAPE ARCHITECT.

19. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.

20. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.

21. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.

22. CONTRACTOR SHALL MAINTAIN TRAFFIC ON ADJACENT ROAD AT ALL TIMES DURING CONSTRUCTION.

23. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.

24. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.

25. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.

26. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL. REFILLED AND COMPACTED.

27. THE CONTRACTOR SHALL PLACE PROPOSED SURFACE COURSE OVERLAY 5 FEET BEYOND LIMITS OF REPLACEMENT PAVING, UNLESS DIRECTED OTHERWISE BY THE ENGINEER IN THE FIELD. ALL OVERLAYS SHALL HAVE SMOOTH, STRAIGHT EDGES. STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION.

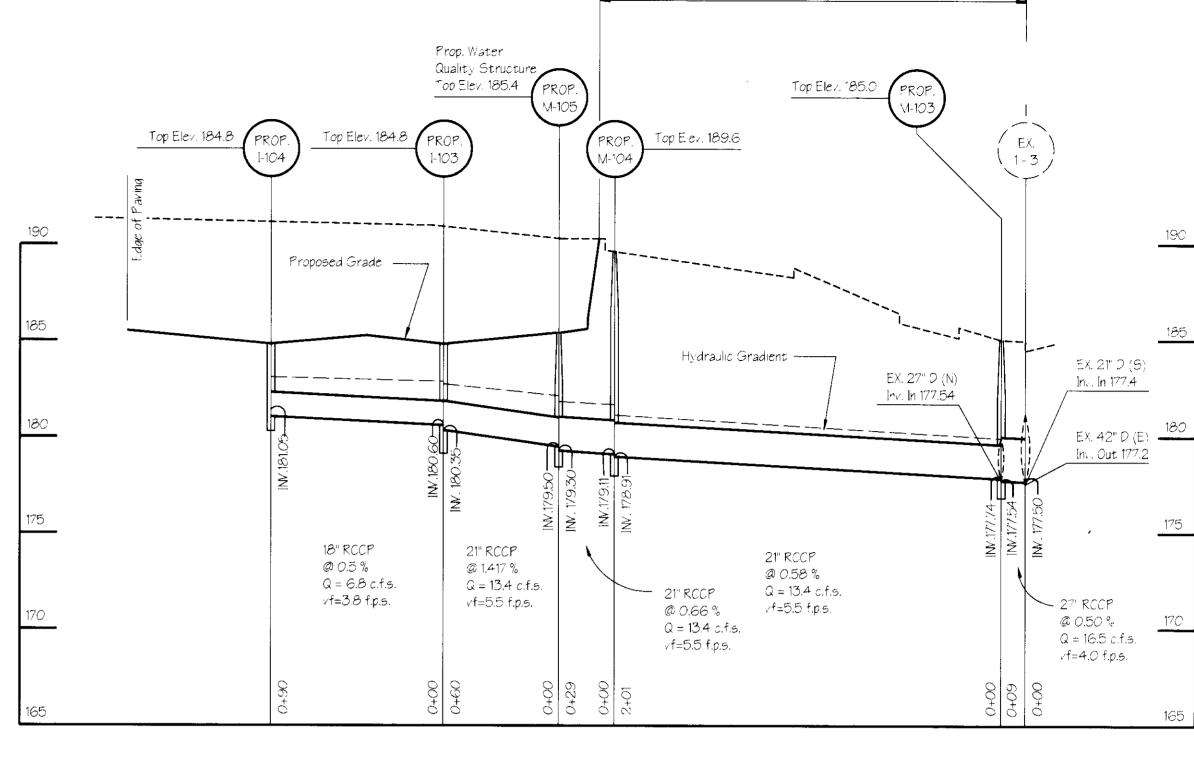
28. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING
COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS
APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
29. SIDEWALK SHALL CONFORM TO DETAIL R-305 OF THE
AFOREMENTIONED HOWARD COUNTY STANDARDS. SLOPE, WIDTH, AND
LOCATION AS SHOWN HEREON. SIDEWALK SHALL PLACED ON A
4" CRUSHED STONE BASE AND IS SHALL REINFORCED WITH WIRE

30. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
31. STORMCEPTORS SHALL BE AS MANUFACTURED BY THE STORMCEPTOR CORPORATION 600 E. JEFFERSON STREET, SUITE 304 ROCKVILLE, MARYLAND 20852 TELEPHONE: 301-762-8361

Quality Structure Top Elev. 194.7 Top Grate. 194.25' PROP. Top Grate. 194.25' — Proposed Grade Existing Ground — Hydrau ic Gradient---,_______ Ex. 24" D (E & W) Inv Out 189.1 15" ROOP @ 0.7% 18' RCCP @ 0.55% Q = 3.0 c.f.s.Q = 5.9 c.f.s.@ 0.52% VF = 2.4 f.p.s. $\sqrt{F} = 3.3 \text{ f.p.s.}$ Q = 5.9 c.f.s.. /f = 3.3 f.p.s.

Prop. Water

Restore to Original Conditions



Restore to Original conditions

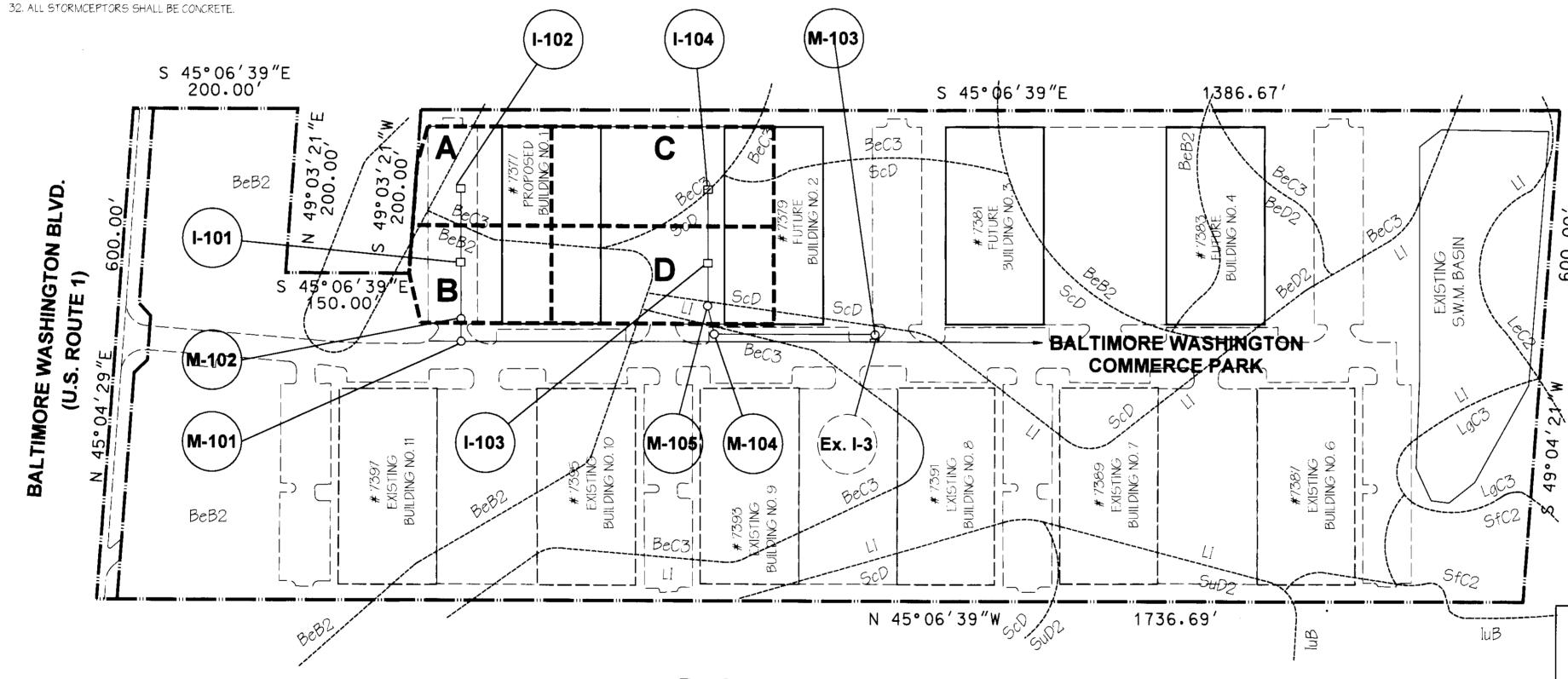
Profile I-102 to M-101

SCALE: /ert. 1" = 5" Horiz. 1" = 50" Profile I-104 to Ex. I-3

SCALE : Vert. 1" = 5' Horiz. 1" = 50'

DATE REVISION BY

12-29-95 PER. HO. CO. E.M.T.



Drainage Area and Soils Map

SCALE: 1' = 100'

ORAINAGE ARES								
AREA	As.	C-Factor	% IMPER.					
A	0.42	0.81	31%					
В	0.42	0.82	82%					
C	0.74	0.95	100%					
0	0.74	0.95	100%					

and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

PREPARED BY :



GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

The owner shall provide a separate and independent sewer connection for

separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County.

each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each

Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate

Civil Engineers and Land Surveyors

658 Kenilworth Drive, Suite 100 Towson Maryland 21204 (410)825-8120



DEVELOPER CERTIFICATION:

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.





HILL MANAGEMENT

OWNER/DEVELOPER

SERVICES, INC. 9640 Deerco Road Timonium, Maryland 21093 410-666-1000

ENGINEER CERTIFICATION:

Icertify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

 Signed
 Date
 3/1/96

 Name
 RICHARD L. UMBARGER
 PE # 10568

	Structure Sche	dule
NO.	TYPE	HOW. CO. STD DETAIL
I-101	"S" Grate	5D - 4.22
I-102	"S' Grate	SD - 4.22
I-103	Double 'S' Grate	SD - 4.23
I-104	Double 'S' Grate	SD - 4.23
-	-	-
M-101	4'-0" Shaliow Precast Manhole	G - 5.12
M-102	Stormceptor Model STC-L-900	-
M-103	4'-0" Std. Precast Manhole	G - 5.13
M-104	Stormceptor Model STC-L-1200	-
1-11-		

APPROVED: Howard County Department of Planning and Zoning

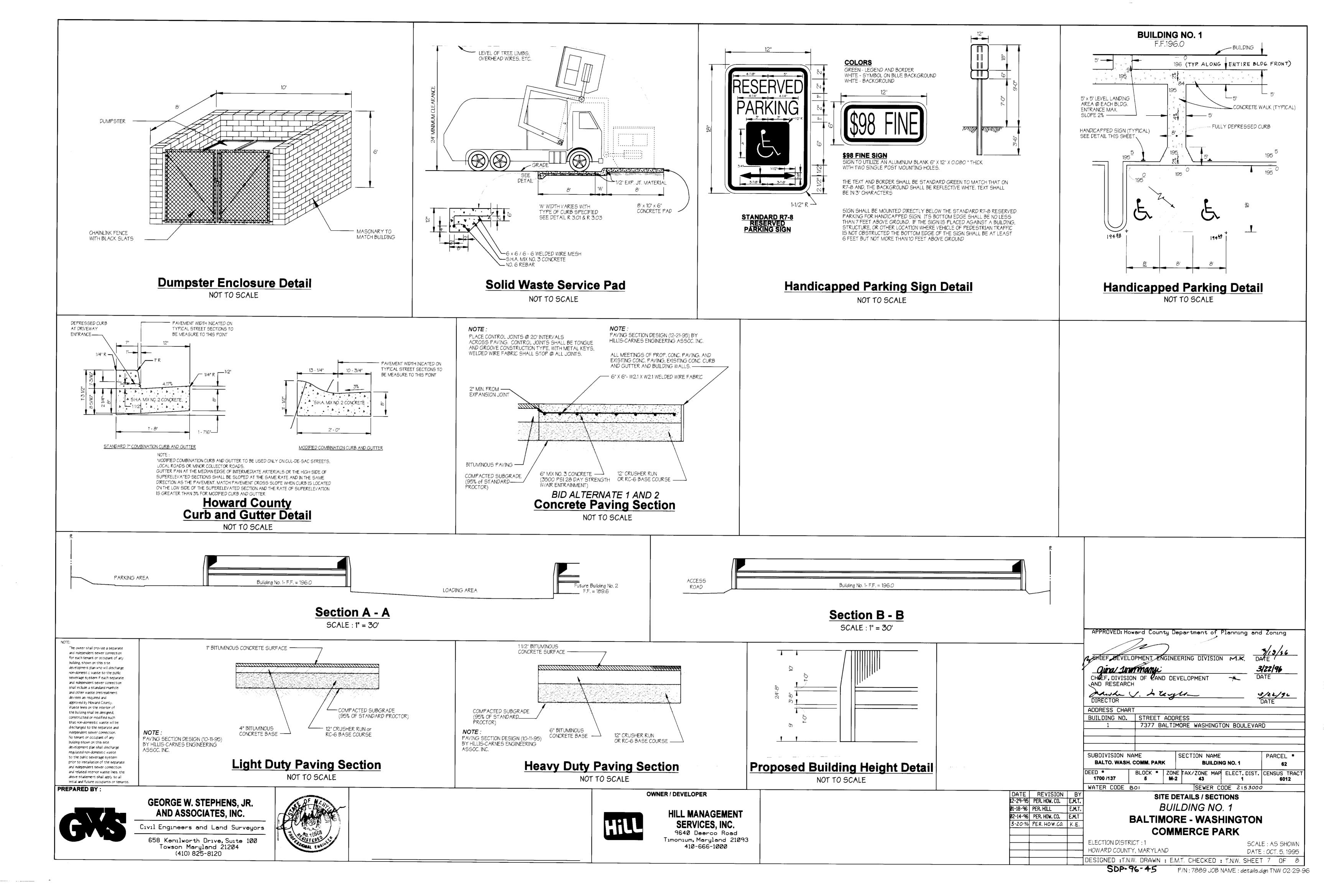
			3/13/46
/ -	ENT ENGINEERING DIVISION	M.K.	DATE
CHIMAL SIV	winanyi		3/22/96
CHIEF, DIVISION O	DF LAND EVELOPMENT	7	DATE
march	· Whileyer		3/22/94
DIRECTOR			DATE
DRESS CHART			
JILDING NO.	STREET ADDRESS		

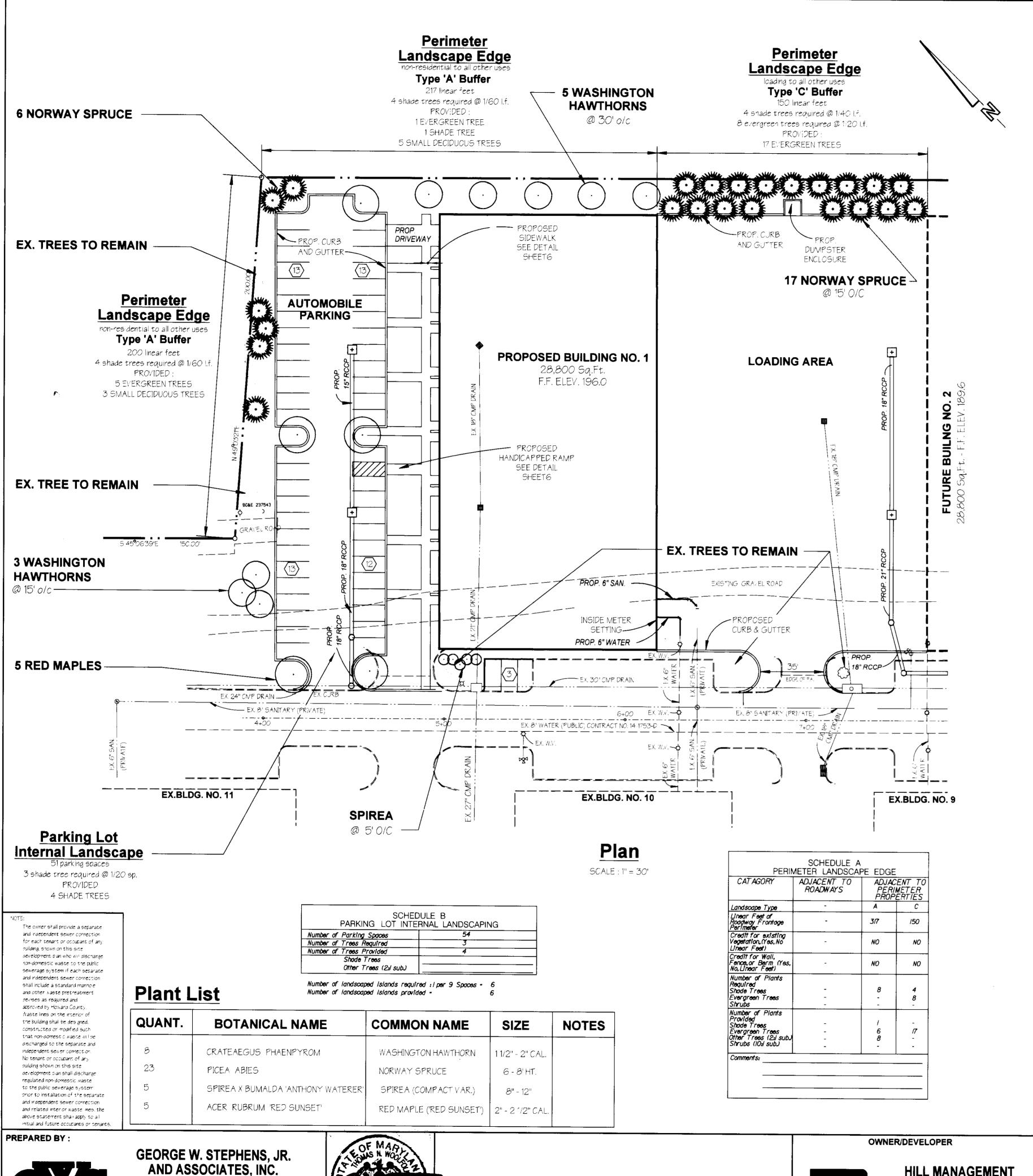
	/3// BAL	IMORE	WASHINGTON BOU	LEVARD	
SUBDIVISION NAMBALTO. WAS	AE SH. COMM. PAR		SECTION NAME BUILDIN	IG NO. 1	PARCEL #
DEED * 1700 /137	BLOCK * 5	ZONE M-2		ELECT. DIST.	CENSUS TRACT
WATER CODE	301		SEWER COL	E 2153000	

UTILITY PROFILES AND SECTIONS
BUILDING NO. 1

BALTIMORE - WASHINGTON COMMERCE PARK

ELECTION DISTRICT: 1 SCALE: AS SHOWN DATE: OCT. 5, 1995
DESIGNED: T.N.W. DRAWN: E.M.T. CHECKED: T.N.W. SHEET 6 OF 8





Landscape Notes

I. GENERAL

THESE PLANS SHALL BE USED FOR PLANTING INSTALLATION

2. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY MORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID 3. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF ANY DISCREPANCY BETWEEN ANY SCALED DIVENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS. THE FIGURED DIMENSIONS SHALL GOVERN.

4. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID.

II. UTILITIES

THE LOCATION OF EXISTING UTILITIES SHOWN HEREON IS APPROXIMATE ONLY AND IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO PLACEMENT OF ANY MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

III. LANDSCAPING

A. STANDARDS:

ALL PLANT MATERIAL, CONSTRUCTION METHODS AND MATERIAL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF "AMERICAN STANDARD FOR NURSERY STOCK," AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS," AS PROPOSED BY THE LANDSCAPE CONTRACTORS ASSOCIATION, THE "HOWARD COUNTY LANDSCAPE MANUAL," AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" OF THE MARYLAND STATE DEPARTMENT OF TRANSPORTATION.

2. ALL TREES SHALL BE DELIVERED TO THE SITE BALLED AND BURLAPPED. ALL SHRUBS SHALL BE BALLED AND BURLAPPED OR IN CONTAINERS. ALL GRASSES & PERENNIALS SHALL BE IN CONTAINERS.

B. MAINTENANCE:

AFTER THE PLANTING HAS BEEN APPROVED BY THE LANDSCAPE ARCHITECT AND THE OWNER, THE MAINTENANCE OF WATERING AND WEEDING OF SUCH PLANTS AND PLANTED AREAS SHALL BE PROVIDED BY THE OWNER. SINCE THE PLANTS ARE TO BE GUARANTEED BY THE CONTRACTOR, THE CONTRACTOR SHALL PERIODICALLY CHECK THE MAINTENANCE CONDUCTED BY THE OWNER. IF THE CONTRACTOR IS NOT SATISFIED WITH THE MAINTENANCE OF THE PLANTS, A WRITTEN REPORT, IN TRIPLICATE, STATING APPROPRIATE CHANGES SHALL BE GIVEN IMMEDIATELY TO THE LANDSCAPE ARCHITECT; TWO COPIES WILL BE FORWARDED TO THE OWNER. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.

. MAINTAIN TREES UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER FINAL ACCEPTANCE OF PLANTING. MAINTAIN ALL PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH, RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP ALL PLANTS FREE OF INSECTS AND DISEASE.

C. WATERING

. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL NOT BE DONE DURING THE HEAT OF THE DAY, CONTRACTOR SHALL PROVIDE A SEPARATE LUMP SUM PRICE IN THE OVERALL LANDSCAPE BID FOR WATERING TO ALL NEW PLANTINGS DURING ONE GROWING SEASON.

D. EXCAVATION

DEPTH AND WIDTH OF EXCAVATION FOR PLANTING OF ALL PLANTS SHALL BE TO TWICE THE DEPTH AND WIDTH OF ROOT BALL OR CONTAINER OF PLANT TO BE INSTALLED, EXCEPT AS NOTED ON DETAILS.

E. TOPSOIL, PLANTING MIX, FERTILIZER, **MULCH AND SOIL** AMENDMENTS:

ALL TOPSOIL SHALL BE WELL GRADED LOAM OF GOOD UNIFORM QUALITY AND SHALL BE A NATURAL FRIABLE SOL FREE OF OBJECTS LARGER THAN ONE INCH IN ANY DIMENSION, AND FREE OF TOXIC SUBSTANCES, WEEDS AND ANY MATERIAL OF SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH, TOPSOIL SHALL CONTAIN AT LEAST ORGANIC MATTER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE TO MEET THE DEPTH AS SPECIFIED HEREIN, THE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL PRIOR TO TOPSOIL DELIVERY, THE CONTRACTOR SHALL OBTAIN THE LANDSCAPE ARCHITECT'S APPROVAL OF THE SOURCE FROM WHICH TOPSOIL IS TO BE FURNISHED.

2. FOR PLANTING MIX, MIX THOROUGHLY 2/3 APPROVED TOPSOIL (SEE "TOPSOIL") AND 1/3 APPROVED ORGANIC MATTER.

3. FERTILIZER TABLETS OR SPIKES TO BE PLACED AT EACH TREE AND SHRUB AT A RATE OF 1 PER 2" OF TRUNK CALIPER OR GALLON OF ROOTBALL. TABLETS OR SPIKES SHALL NOT BE IN CONTACT WITH THE ROOTBALL

4. MULCH MATERIAL SHALL BE OF UNIFORM SIZE, FINE SHREDDED TANBARK HARDWOOD MULCH OR APPROVED EQUAL MULCH SHALL BE A REDDISH DARK BROWN COLOR AND SHALL BE LAID TO A UNIFORM MINIMUM DEPTH OF 2 INCHES. MULCH AREAS AROUND TREES AT THE RATE OF 1' OF DIAMETER PER OF TRUNK

5. HYDROGEL ABSORBENT MATERIAL SHALL BE ADDED TO THE PLANTING HOLE FOR EACH TREE AND SHRUB AT THE RATE OF 4 OUNCES PER 2-1'2' CALIPER OR GALLON OF ROOTBALL. HYDROGEL MATERIAL SHALL BE VITERRA "GELSCAPE," "TERRASORB," OR APPROVED EQUAL.

F. SUBSTITUTIONS:

1. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE BIDDING. THE OWNER OR LANDSCAPE ARCHITECT WILL THEN SELECT A REASONABLE ALTERNATE OR INFORM ALL LANDSCAPE CONTRACTORS OF THE AVAILABILITY OF THE ORIGINAL PLANT.

G. PRUNING, CLEANUP, PROTECTION OF **EXISTING MATERIALS AND RESTORATION**

1. THE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE DETAILS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

2. DURING COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED. LAWN AREAS KEPT CLEAR, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE TO ANY EXISTING LAWNS, PAVING. ETC, NOT SCHEDULED FOR REMOVAL, WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEANED UP THOROUGHLY. DEBRIS. RUBBISH, SUBSOIL AND WASTE MATERIALS SHALL BE CLEANED UP AND REMOVED FROM THE PROPERTY. EXISTING GRASS AREAS WHICH HAVE BEEN INJURED BY THE WORK SHALL BE REGRADED AND SODDED TO MATCH THE EXISTING LAWN: THE ENTIRE AREA SHALL BE NEAT AND CLEAN TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.

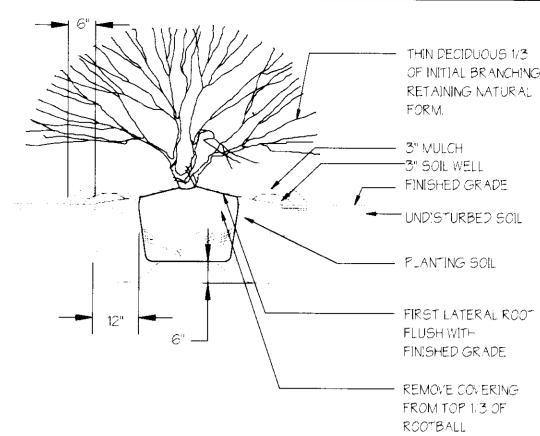
3. CONTRACTOR SHALL, AT ALL TIMES, PROTECT ALL PLANTS AND LAWNS FROM DAMAGE. THE MOVING OF HEAVY EQUIPMENT OR MATERIAL OVER THE LAWN AREAS SHALL BE DONE ON PLANKS OR

4. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENTS, SODDED OR PLANTED AREAS, STRUCTURES OR SUBSTRUCTURES, NOT SCHEDULED FOR REMOVAL, WHICH ARE DISTURBED BY THE CONTRACTOR DURING PLANTING OPERATIONS. SUCH RESTORATION SHALL BE. IN A MANNER SATISFACTORY TO THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

H. FINAL INSPECTION AND GUARANTEE:

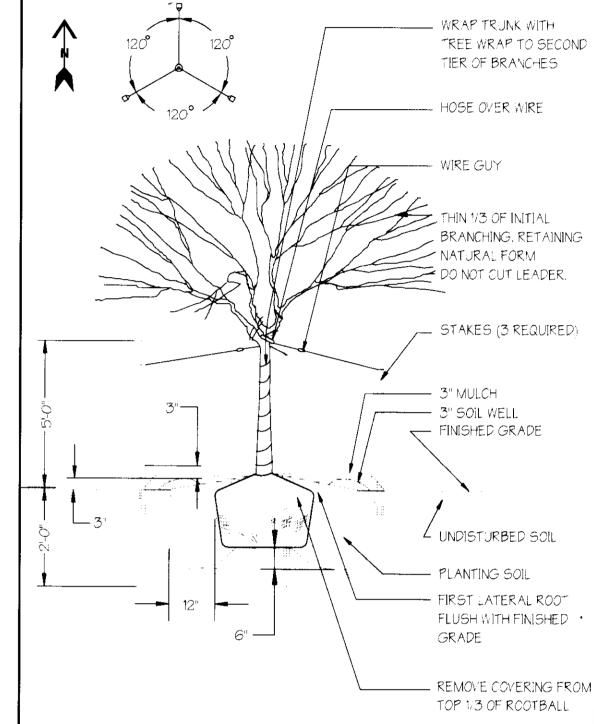
1. AFTER PLANTING IS COMPLETED (INCLUDING MULCHING AND ARCHITECT IN WRITING TO REQUEST FINAL INSPECTION OF THE TOTAL PLANTING. THE LANDSCAPE ARCHITECT SHALL MAKE A FINAL INSPECTION VISIT AS SOON AS POSSIBLE. LANDSCAPE ARCHITECT S-ALL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, WHEN ALL WORK IS SATISFACTORILY COMPLETE. IF WORK IS NOT SATISFACTORILY COMPLETE, THE LANDSCAPE ARCHITECT WILL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, AS TO THE DEFICIENCIES IN THE WORK AND THE NECESSARY CORRECTIVE MEASURES. THE LANDSCAPE CONTRACTOR WILL BE GIVEN A REASONABLE AMOUNT OF TIME TO CORRECT THE DEFICIENCIES, AND ANOTHER FINAL INSPECTION WILL BE SCHEDULED BY THE LANDSCAPE ARCHITECT.

2. ALL PLANT MATERIAL AND LAWN AREAS SHALL BE GUARANTEED TO BE IN A VIGOROUS GROWING CONDITION ONE YEAR FROM THE DATE OF FINAL INSPECTION AND ACCEPTANCE. AT THE TERMINATION OF THIS PERIOD, THE CONTRACTOR SHALL HAVE COMPLETED THE PRECEDING MAINTENANCE SCHEDULE. ANY PLANTS INFECTED WITH DISEASE OR INSECTS WILL BE REMOVED OR TREATED. ALL DEAD OR UNACCEPTABLE PLANTS WILL BE REPLACED BY THE SAME PLANTS AND SIZES DESIGNATED ON THE PLANT LIST. THESE PLANTS SHALL BE PLANTED, MULCHED AND GUY AS SPECIFIED HEREIN AND WITHOUT EXTRA COMPENSATION TO THE CONTRACTOR. AT THE COMPLETION OF ALL SUCH WORK AND WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, THE CONTRACT WILL BE CONSIDERED COMPLETE.



Shrub Planting Detail

STAKING DETAIL



Notes

Tree Planting Detail

. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL

B. "FINANCIAL SURETY FOR THE REQUIRED LANDSCAPE MUST BE POSTED AS PART. OF THE GRADING PERMIT IN THE AMOUNT OF \$2,500.00.

APPROVED: Howard County Department of Planning and Zoning 3/22/96 sima Juramananyi

1/22/96 ADDRESS CHART BUILDING NO. STREET ADDRESS 7377 BALTIMORE WASHINGTON BOULEVARD SUBDIVISION NAME SECTION NAME

PARCEL * BALTO. WASH. COMM. PARK **BUILDING NO. 1** BLOCK # ZONE TAX/ZONE MAP ELECT. DIST. CENSUS TRAC M-2 1700 /137 WATER CODE BOI SEWER CODE 2153000 LANDSCAPE PLAN DETAILS / SPECIFICATIONS

BUILDING NO. 1 **BALTIMORE - WASHINGTON COMMERCE PARK**

ELECTION DISTRICT: HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: OCT. 5; 1995 DESIGNED : T.N.W. DRAWN : E.M.T. CHECKED : T.N.W. SHEET 8 OF 8

P/N: 7889 NAME: landscape.dgn E.M.T. 02-16-96

HILL MANAGEMENT SERVICES, INC.

9640 Deerco Road Imonium, Maryland 21093 410-666-1000

ivil Engineers and land Surveyors

658 Kenilworth Drive, Suite 100

Towson, Maryland 212 04

(410) 825-8120

DATE | REVISION |

Ø1-18-96 PER. HILL

12-29-95 PER. HOW. CO. E.M.T.

02-14-96 PER. HOW. CO. E.M.T.

